



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/579,803	05/26/2000	Takahiro Fukuhara	450101-02516	8527
20999	7590	08/12/2004	EXAMINER	
FROMMER LAWRENCE & HAUG 745 FIFTH AVENUE- 10TH FL. NEW YORK, NY 10151			WU, JINGGE	
			ART UNIT	PAPER NUMBER
			2623	

DATE MAILED: 08/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/579,803

Applicant(s)

FUKUHARA ET AL.

Examiner

Jingge Wu

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☐ Claim(s) 1-22 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendment

1. Applicant's amendment filed on May 25, 2004 has been entered and made of record.
2. Applicants' amendment has required new grounds of rejection. New grounds rejection are therefore presented in the Office Action.
3. Applicant's arguments with respect to claims 1, 8, 9, and 17 have been fully considered but are moot in view of the new ground(s) of rejection.

Specification

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: in claims 1 and 9, Applicant claims first decoding object coefficient extracting means, first wavelet inverse transform means, second decoding object coefficient extracting means, and second wavelet inverse transform means. However, Applicant only discloses one decoding object coefficient extract means (e.g., fig. 11, 12) and one wavelet inverse transform means (e.g., fig. 11, 13). Nowhere in the specification discloses second decoding object coefficient extracting means, and second wavelet inverse transform means, which are claimed. In claims 9 and claim 17, Applicant claims inverse transforming the extracted second partial coefficients and **said first partial coefficients transformed by the first wavelet inverse transform means** (emphasis added by the Examiner). The step is not supported by the specification. If first partial coefficients are transformed by first wavelet inverse transform means, they

are not coefficients anymore and can not be inverse transformed again. In fact, the specification only discloses inverse transforming the extracted coefficients once (see fig. 11).

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1 and 9 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for means for extracting decoded partial coefficients and means for inverse wavelet transforming those extracted coefficients, does not reasonably provide enablement for second decoding coefficients extracting means and second inverse wavelet transforming means. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to understand the invention commensurate in scope with these claims. Correction is required.

Claims 8 and 17 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for inverse wavelet transforming the extracted coefficients, does not reasonably provide enablement for inverse wavelet transforming whatever is that first extracted coefficients is inverse transformed first extracted coefficients. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to understand the invention commensurate in scope with these claims. Correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-2, 3, 5, 8 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6587588 to Bottou et al..

As to claim 1 (best under standing of Examiner according to the specification), Bottou discloses a wavelet inverse transform device comprising:

decoding object coefficient extracting means (fig. 6, 603 and 605) for extracting a plurality of coefficients (fig. 5, 54, more than one coefficients) necessary for decoding a specified area (fig. 5, 50) of a picture (col. 17 line 23-65); and

wavelet inverse transform means (fig. 9, 907, 913, and 919) for inverse wavelet transforming the plurality of coefficients (901) extracted from the decoding object coefficient extracting means (col. 18 lines 23-54),

wherein, the decoding object coefficient extracting means extracts transform coefficients (fig. 5, 54, note that the coefficients including the block area not covered by the image segment 50) outside of the specified area (fig. 50) that are necessary for decoding at least one of said transform coefficients inside said specified area (abstract, fig. 5-6, 50 and 52, col. 17 lines 30-65).

As to claim 2, Bottou further discloses a object area (fig. 5, 50)determining means for determining a decoding object area for extracting the coefficients (col. 17 lines 23-65).

As to claims 3 and 5, Bottou further discloses a plurality of splitting levels for the transform coefficients and include inside and outer rim side of hierarchical levels based on the specified area (fig. 5, 50, 52, and 54, col. 17 lines 23-65).

As to claim 8 (best under standing of Examiner according to the specification), Bottou discloses the steps of:

extracting (fig. 6), form a plurality of wavelet transform coefficients, first partial coefficients necessary for decoding a specified area (fig. 5, 50) of a picture (fig. 6, 603 and 605);

extracting (fig. 6), form a plurality of wavelet transform coefficients, second partial coefficients necessary for decoding a specified area (fig. 5, 50) of a picture (fig. 6, 603 and 605, note that extracting the second partial coefficients is inherent by the looping operation in fig. 6);

inverse transforming said extracted first and second partial coefficients by a wavelet inverse transform means (fig. 9, col. 18 lines 23-54).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 4, 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bottou in view of US 6473528 to Li et al. (a reference of record).

As to claim 4, Bottou does not explicitly mention the number of impulse response filters.

Li, in an analogous environment, further discloses the transform coefficients on the outer rim side of the specified area are extracted corresponding to the number of the impulse response of filter used in the IWT (col. 6 line 10-col. 7 line 16, col. 8 lines 20-30).

As to claims 6-7, Li further discloses coefficients in a valid range (object area) based on overlap holding processing is performed from one level of the wavelet splitting to another (col. 6 line 23-col. 7 line 16).

11. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bottou in view of US 5933535 to Lee et al. (a reference of record).

As to claim 9 (under best understanding of the Examiner), discloses all limitations (see discussion with regard to claims 1 and 3) except entropy decoding.

Lee, in an analogous environment, discloses the entropy decoding used with IWT (col. 28 line 61-col. 29, line 3).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the scheme of Lee in the device of Li in order to efficiently code/decode the image.

As to claim 10, Bottou and Lee do not explicitly mention dequantizing means.

Examiner takes Official Notice that this feature is notoriously well known in the art.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the dequantization scheme in the device of Li in order to efficiently code/decode the image.

12. Claims 11-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bottou and Li, further in view of Lee.

As to claims 11-16, the discussions are addressed with regard to claims 3-7.

As to claims 17-18, the claims are corresponding method claims to claims 8-9, 10 respectively. The discussions are addressed with regard to claims 8-9, 10.

As to claims 19-22, Bottou further discloses the object coefficients extracting means/steps includes extracting the transform coefficients outside said specified area (fig. 5, 52 and 52, note that some coefficients corresponding to the area 52 but not area 50 would be extracted according to fig. 6) that are necessary for decoding at least one of said transform coefficients inside said specified area (figs. 5-6, col. 17, lines 23-65).

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

14. Any inquiry concerning this communication or earlier communications should be directed to Jingge Wu whose telephone number is (703) 308-9588. He can normally be reached Monday through Thursday from 8:00 am to 5:30 pm. The examiner can be also reached on second alternate Fridays.

Any inquiry of a general nature or relating to the status of this application should be directed to TC customer service whose telephone number is (703) 306-0377.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Amelia Au, can be reached at (703) 308-6604.

The Working Group Fax number is (703) 872-9314.

Jingge Wu

Primary Patent Examiner

